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ABSTRACT

The production of plays enables the students to associate themselves with the total matrix of the play--its social, political, economic, and cultural aspects; thus theater teaching should be ideally suited to learning cultural concepts about a specific country. This study tested a program of theater teaching against a more conventional teaching program (lectures and the discussion of plays, but no active participation) to see which would best promote knowledge gain and change in affective behavior among ninth graders. The experimental group produced and acted in plays about India. Results showed that students preferred to participate in the theater experience, but that there was no significant advantage in knowledge gained. (RB)

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THEATRE AS A COMMUNICATION MODE FOR THE STUDY OF CULTURAL CONCEPTS OF INDIA

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A b s t r a c t :

This study explored the relationship of two theatre teaching treatments to student knowledge gain and change in affective behavior on selected cultural concepts of a specific country, India, for high and low dogmatic students. The teaching treatments were defined as open (produced classroom plays) and closed (did not produce classroom plays). S_s were drawn from ninth grade intact English classes where teachers were willing to cooperate. Three hypotheses were examined. Students would prefer the open teaching treatment and show greater gains in knowledge and changes in affective behavior on India in the open than in the closed treatment by dogmatism levels.

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One of the unique functions of the theatre is its ability to teach and to entertain simultaneously. Perhaps no other single vehicle of artistic expression offers such a wide range of human learning experiences.

Aside from its ability to entertain, theatre, as a teaching tool in the school classroom, may actively involve the students in role-playing activities. The various activities of producing a play and acting in it offer the potential for stimulating all of a student's sensory channels, including the kinesthetics of bodily movements. The activation of this sensory discrimination makes it possible to employ a larger number of message channels (sense organs) over which information of a varied discriminatory nature can be communicated to a student than in a learning situation in which the primary message channels employed are sight and sound. Finally, the dramatization of a play by the students in the school classroom stimulates the students to become immersed in the natural process of imitative behavior, concomitant with intellectual enlightenment. They associate themselves with the total matrix of the play -- its social, political, economic, and cultural aspects. Consequently, theatre activities may be

a unique classroom teaching tool for learning cultural concepts of a specific country.

Rationale

In the area of active participation and role-playing, experiments in persuasion have generally supported the proposition that the more actively an individual is involved with the role he is playing and its supportive arguments, the more likely he is to take on the behavioral attitudes associated with the role he is playing (15).

From the standpoint of learning theory, evidence has shown that the more sense organs of the individual which are activated in the learning process the greater the sensitization of the individual to the sources of information available to him within his immediate environment (12).

Subsequent studies conducted by Hovland et al (9) during World War II support this learning concept in a communication context. They found that the more sense organs of the individual activated, i.e. the more message channels used by the individual, the more information he can receive from his surrounding environment. Extending this concept, Berlo (4) maintains that the number of message channels (sense organs) used and how vividly they are activated is crucial to the amount of information an individual perceives in the learning process.

The use of drmatizations in the classroom is a good means to effect learning because the vividness of dramatized human experiences heightens the intensity of the messages by involving the students in the total context of playmaking through participatory activities, i.e., role-playing, building props, etc.

Dale (7) points out that drama has a way of taking its participants into the very essence of their total environment by merely capitalizing on their natural impulse to imitate human behavior through playmaking. The potential for this effect, also, exists in playseeing.

The difference between playmaking and playseeing is the difference between the actual and the vicarious experience. Dale (7) maintains that an observer of a play may retain a great deal of information from a vividly dramatized experience in which he is absorbed. He may vicariously involve himself with the subject matter of the play and in doing so, he may learn from this process.

Furthermore, Dale (7) points out that even though vicarious involvement in playseeing may be an effective means to student learning, active student participation in playmaking activities are even more effective in producing student learning. The student becomes involved intimately with the "insights" of character portrayal and the supportive aspects, i.e. building sets, making costumes, etc. of creating the environmental context in which the play's characters function. His reconstruction of the playmaking experience teaches him as he reconstructs it. He may acquire information by actually experiencing the dramatized subject matter.

Also, Dr. James E. Miller, Jr. (13), President of the National Council of Teachers of English, reiterates Aristotle's claim that the impulse to act out, to dramatize things, exists in people, including children, from the beginning, and it is frequently suppressed because it disturbs the classroom or is outside the curriculum. Teachers should capitalize on

this impulse because literature offers a rich heritage of human social and cultural values which can aptly be studied through the children's natural desire to learn by playmaking.

The evidence seems to support the contention that theatre may be viewed as a vehicle which reflects human social conditions and cultural values, and that it, also, may be viewed as a teaching medium which imparts this social and cultural information to the individual.

This study will further explore the use of theatre as an instructional medium in the school classroom. Specifically it will evaluate two ways of using theatre in the classroom in terms of students' learning regarding one country, India.

Teaching Treatments

At this point an overview of the two teaching treatments is necessary so we can better understand their conceptualizations. They will be identified as open and closed. It must be pointed out that they are not discrete categories but points (ends) on a continuum identified by X dimensions. Operationally, for our purposes at this point, we can say that students in the open teaching treatment will produce Indian plays in the classroom, while students in the closed teaching treatment will not produce Indian plays in the classroom.

A way to clarify the distinctions of the teaching treatments is to discuss their inherent dimensions. These dimensions to be discussed are: (1) number of sensory channels employed and the degree to which they are employed, (2) perception of feedback and the direction of the information flow, (3) interaction and the degree of teacher control of the classroom learning process, and (4) involvement and the energy expended

in varied manipulative activities in the learning process.

(1) Number of Sensory Channels Employed and the Degree to Which They Are Employed. A key factor of the open teaching treatment is that it offers a greater potential than the closed treatment for stimulating all sensory channels. The nature of the various manipulative activities needed for a play's overall dramatic effect, i.e. acting a role, making costumes, applying make-up, etc. will allow more opportunities to stimulate to a higher degree all of the students' sense organs (sight, sound, touch, taste, smell, and sensory tonic).

A distinguishing feature of the closed teaching treatment is that there are no manipulative activities of a dramatic nature to stimulate all of the students' sense organs. The primary sense organs to be stimulated are sight and sound because the nature of this teaching treatment is lecture and reading centered, including the viewing of films. Consequently, there are fewer opportunities to stimulate to a higher degree all of the students' sense organs.

(2) Perception of Feedback and the Direction of the Information Flow. A central feature of the open teaching treatment appears to be a higher proportion of the two-way flow of information between and among the teacher and the students. Both may be viewed as sources of information and receivers of information. The messages flow from (1) the teacher (source) to the students (receivers), (2) the students (sources) to the teacher (receiver), and from (3) student (source) to student (receiver). Basically, the teacher seems to have the option to act as a coordinating agent delegating or sharing the information exchange function

with the students.

In contrast to this, a central feature of the closed teaching treatment appears to be a higher proportion of the one-way flow of information from the teacher (source) to the students (receivers). Messages may mostly originate with the teacher, rather than with the students. Here the teacher may not act as a coordinating agent delegating or sharing the information exchange function with the students because the teacher seems to have the option to exercise the primary control over this information exchange function.

(3) Interaction and the Degree of Teacher Control of the Classroom Learning Process. In both of the teaching treatments the role of teacher-control is important. How the teacher functions in each one is unique to that specific teaching treatment.

Specifically in the open teaching treatment, we attempted to establish a mode of low teacher-centered control. Here the teacher was encouraged to serve as a co-worker-coordinator sharing or delegating the control-involvement with the students, rather than restricting their activities. Both may stimulate each other for ideas and information from varied sources on Indian cultural concepts found in the selected Indian plays. In a sense, the teacher and the students may be viewed as co-explorers of many ways to involve themselves in manipulative and decision making activities to find pertinent information and communicating it in an atmosphere of free exchange of ideas unencumbered by imposed restrictions on spontaneous expression and interplay among the participants.

Focusing more closely on the control function, it appears that it flows spontaneously out of the materials (Indian plays) under investigation and the related selected theatre activities needed to produce them, rather than what the teacher says. Here the teacher does not control the flow of new Indian cultural concepts, letting them evolve out of the play materials, questions by the teacher and the students, and the activities needed to understand and interpret the meanings in the Indian plays being readied for production. New concepts are introduced as the need for information to interpret the plays arises.

Interaction between the teacher and the students is crucial so everyone is able to understand more fully their duties and responsibilities, the meanings in the Indian plays, and how best to produce them for their maximum effect on the learning process for all the participants involved.

In the closed teaching treatment, however, the mode is high teacher-centered control. The teacher is not expected to act as a co-worker-coordinator sharing or delegating the control-involvement with the students. Here the control-involvement activities reside specifically with the teacher. The exchange of ideas and information may not spontaneously evolve out of the play materials, activities, and the interplay between the teacher and the students. In this teaching treatment the teacher has the option to determine what may be taught, when it may be taught, and how it may be taught regarding the cultural concepts found in the Indian plays. Even though we may not be so concerned in this teaching treatment

with group interplay and activity which involves most of the students, message content generally is selected by the teacher (source) so that it is pertinent to the Indian cultural concepts under investigation as well as being presented to the students in an interesting way, i.e. the use of thought-provoking statements, raising points on whether the Indian way of life is better suited to individual happiness than the American way of life, etc., so they will be stimulated to want to learn about India.

Basically, in the closed treatment, we can say that the control function is oriented more toward what the teacher says about the Indian cultural concepts found in the Indian plays. The number of new concepts which are to be studied, when they are to be studied, and the way they are to be studied rests with the teacher, rather than the students.

Interaction is necessary here. However, the need for it may not be as urgent as in the open teaching treatment because the participants may not be as directly involved in a context of new concepts evolving spontaneously out of the play materials, questions by the teacher and the students, and the activities needed to understand and interpret the meanings in the Indian plays being readied for production. Nevertheless, interaction is needed so the teacher knows when new concepts are understood by the students, as a check on the teacher's messages to see if they understand the content of the messages, and as a means for the teacher to know when to introduce more new cultural concepts on Indian life.

(4) Involvement and Energy Expended in Varied Manipulative Activities. Bruner (5) claims in his theory of instruction

that teaching is "discovery" in materials and lessons of what might occur, not what did occur in which the teacher and the students are equally involved in the learning experience, sharing subject matter, evaluation, and decision formation. A key word in this statement is involvement between the teacher and the students in the learning process. How involvement is used in the two teaching treatments is of interest to us.

In the open teaching treatment emphasis is on high student involvement through active group participation, group discussions, and group and individual manipulative activities as they relate to the acting out of Indian plays as the central focus of the classroom learning process. Vital to all the participants is the ability to work together as a team, to complete a project (the plays), and the ability to delegate and accept group and individual responsibilities in a matrix of varied points of view on how to produce the plays and to portray maximum information on Indian cultural concepts.

Conversely, in the closed teaching treatment emphasis is on low student involvement through passive participation by each student separately, rather than active group participation. No Indian plays will be produced in the classroom. No manipulative play production activities will be undertaken by the students. Activities will be limited to class discussions on the Indian plays. Lectures by the teacher will be of prime importance, and student involvement in doing individual assignments, i.e. reading the Indian plays, preparing oral reports on them, etc., rather than acting out human experiences through playmaking. It is possible that students may become involved

in imaginary role-taking as they read the plays. This is an element over which teachers will have no control.

All learning processes involve energy expenditure of varying degrees by the teacher and the students involved. A distinguishing feature of this dimension in the two teaching treatments appears to be the varying degrees of energy expenditure needed by the participants to function in each of them.

In the open teaching treatment the tone is expected to be one of higher energy expenditure. The process of producing plays in the classroom involves many manipulative activities, i.e. portraying characters, building props, etc. The very nature of these activities requires that a large degree of energy be expended by the participants in order to complete the tasks of readying the Indian plays for production. This expenditure of energy and the various delegated responsibilities in a more highly unstructured environment puts pressure on each participant to establish his own mode of operation in conjunction with the overall group responsibilities. This uncertainty produces tension in the participant leading him to direct his efforts to reduce the tension. This is expected to lead to higher energy expenditure in the open than in the closed teaching treatment.

To reduce this uncertainty, the selecting, processing, and integrating of the needed information to complete his tasks should be dependent on his asking many pertinent questions. This will place emphasis on feedback and interaction between the teacher, the groups and each individual within the groups. This interaction tends to keep the energy expenditure high

until all the activities to "ready" the Indian plays for production are completed.

Looking at the closed teaching treatment, the tone seems to be one of lower energy expenditure. The more structured environment of listening to lectures by the teacher on the Indian plays, reading them, and discussing them in the classroom involves less activity from the students than when they are in a more unstructured environment of producing plays in the classroom because of the various manipulative activities needed to stage plays.

How actively or passively an individual participates in an endeavor can have an effect on his susceptibility to be influenced by the nature of the endeavor undertaken. Plays as dramatized human experiences offer some interesting possibilities for the students and teacher to become actively involved in the learning process.

Role-playing is vital here. Research findings generally maintain that the more active a person is in the role-playing situation the more likely he is to become like the role he is playing (15). In general, this change is attributed to a certain degree to the amount of "effort" expended by active participation in the role-playing situation because becoming like the role he is playing heightens his feelings of inconsistency between his real self and the imaginary self he is playing. In order to reduce this inconsistency, he expends energy in justifying to himself why the role he is playing is believable.

Cognitive dissonance theory may be a way of looking at this change. This theory maintains that a person will

achieve consonance by his altering his private beliefs about the activity he is engaged in. If, in his own mind, he increased the attractiveness of the activity, then he would have justified his having expended so much energy (8).

Learning theory is also used to interpret the relationship of role-playing to change in attitude. According to this approach, active participation is more effective than passive participation because of the increased likelihood of the subject's attention to and comprehension of the stimuli. A passive participant may not fully attend to the arguments presented. His mind might wander, and he might miss the premise of the arguments, etc. An active participant, especially one who was forced to improvise his own arguments, would at least listen to himself. And by improvising his own arguments, he should have a better understanding of them (12).

Dale (7) lists several factors which are unique to plays as dramatized experience and which emphasize the high level of psychological involvement of those participating:

(1) All dramatization is essentially a process of communication, in which both participant and spectator are engaged. Whether you act or observe, the dramatization is a substitute for the real experience.

(2) The subject matter of a dramatization is stirring and attention-compelling; as such, it is not easily forgotten.

(3) Each participant in a playmaking experience learns to understand intimately the character he portrays. If he is to project his role, he must get inside the character; he must perform the character's meanings, or he fails utterly.

(4) Dramatizations teach students -- not merely the performers but everyone also involved -- to work cooperatively toward a common goal.

(5) A group undertaking playmaking will get enriching and unsuspected insights into the playwright's thought -- provided, of course, that the teacher guards against the parroting of passages that are not really comprehended.

These findings suggest that the play acting involvement would lead to increased behavior change through student role-playing and student involvement with dramatized human experience.

Dogmatism

Although the discussion thus far suggests that the open teaching treatment is superior, there may be some students for whom the closed teaching treatment will induce more change in behavior and be preferred by them.

One kind of individual difference which may be related to response to different teaching styles is the level of dogmatism of the learner.

A dogmatic person or a "dogmatic thinking" person, according to Rokeach, has a relatively closed cognitive organization of beliefs-disbeliefs about reality. He has a "resistance to change" his systems of beliefs. He experiences more difficulty in accepting change or a new system of beliefs (14).

If dogmatism is operating in this study, high dogmatic students may have a tendency to prefer a learning environment of less personal involvement and interaction than low dogmatic students. One explanation is that these students have a higher resistance to changing their belief-disbelief systems than low dogmatic students do.

Thus far we have discussed the distinguishing features of the two teaching treatments (open-closed) and the supportive findings for these features. Also, we have attempted to show

that some students (high-low dogmatics) may prefer one teaching treatment over the other. Furthermore, we have tried to show that dogmatism may be related to students' "resistance" to changing their belief-disbelief systems.

Now we must consider another facet of this study; that is, information inputs and activities may be manipulated in specific teaching treatments (open-closed) which may have an effect upon the students' knowledge gain, and change in behavior regarding India.

Knowledge Gain. When a student encounters at the beginning and throughout a specified period of time in a course of study a way of thinking and system of beliefs that is new to him (the teaching treatment and the subject matter emphasis would constitute the new way of thinking and the new system of beliefs), he has to react to this new situation in some way. He must find some way to apply the new way of thinking and the new system of beliefs to his present belief-disbelief system.

It can be said that knowledge gain has occurred if at the end of the course of study by the use of a pretest-post-test questionnaire the student shows a positive increase in correct answers consistent with the way of thinking and the system of beliefs that comprise the subject matter of the course.

Change in Affective Behavior. Opinion, attitude, belief do not have fixed meanings but, in gereral, they refer to a person's preference for one or another side of an issue in the public domain: a political party, a religious idea, a moral position, an aesthetic taste, a cultural value, or a certain practice or habit; such as, buying a particular kind of ice

cream. According to Berelson and Steiner, they are a set of personal covert judgments. Opinions are said to be short-run judgments; attitudes are more enduring judgments; beliefs are basic values of life judgments (3).

This is one way to view these aspects of human behavior. Other scholars view them differently. Consequently, it is very difficult to reach a point of common agreement among scholars on just what constitutes human opinions, attitudes, and beliefs.

Be this as it may, we do know that an individual does respond in a certain way when he is confronted by some kind of stimulus. He acts or reacts to it. In other words, he has a change in his existing covert behavior because the stimulus has affected him covertly in some way. We can call this a change in affective behavior, which removes us from the necessity of becoming involved with the definitive "hair splitting" of deciding what constitutes the differential nature of an opinion, attitude, or belief.

In any human learning process, a student will be confronted by different kinds of stimuli which can be in the form of a new way of thinking and a new system of beliefs (the teaching treatment and the subject matter emphasis would constitute these different kinds of stimuli). He has to react internally to these stimuli in some way. He must find some way to apply the new way of thinking and the new system of beliefs into his existing habits of covert behavior. A change in his behavior should be affected by the way he adjusts to these new stimuli.

It can be said that a change in affective behavior has occurred if at the end of a course of study by the use of a pretest-posttest questionnaire the student shows a shift,

positively or negatively, in his previously existing habits of covert behavior toward the way of thinking and the system of beliefs that comprise the subject matter of the course in such a way as to accept or reject appreciably the phenomena studied in the course.

Student Preference for Teaching Treatments. We, also, would like to know if high dogmatic students prefer the open or the closed teaching treatment, and which the low dogmatic students prefer. If they prefer one over the other, is there a relational effect on their amount of knowledge gain and the degree of their change in affective behavior regarding India because of this preference.

Hypotheses

As previously stated, the purpose of this study is to evaluate two teaching treatments (open-closed) using theatre with two types of students (high and low dogmatics) in terms of learning regarding one country, India. We would like to know the effect of each teaching treatment on each type of student in terms of their knowledge gain, and their degree of change in affective behavior on the phenomena to be studied, India.

Based on the arguments and the research findings presented thus far, the following hypotheses express the expected relationships between teaching treatments, dogmatism, knowledge gain, change in affective behavior, and preferred learning environment.

(H1) Students will prefer the teaching style which offers a wider range of sensory stimulation, more feedback, and more involvement, i.e. the open rather than the closed teaching treatment. If there is a difference between high and low dogmatic individuals in their preference:

(a) high dogmatic students will prefer with greater frequency a closed teaching treatment,

(b) and the low dogmatic students will prefer with greater frequency an open teaching treatment.

(H2) Students will show a greater knowledge gain in the teaching style which offers a wider range of sensory stimulation, more feedback, and more involvement, i.e. the open rather than the closed teaching treatment. If there is a difference between high and low dogmatic individuals in their knowledge gain:

(a) high dogmatic students will show with greater frequency an increase in knowledge gain in the closed teaching treatment,

(b) and the low dogmatic students will show with greater frequency and increase in knowledge gain in the open teaching treatment.

(H3) Students will show a greater change in affective behavior in the teaching style which offers a wider range of snesory stimulation, more feedback, and more involvement, i.e. the open rather than the closed teaching treatment. If there is a difference between high and low dogmatic individuals in their change in affective behavior:

(a) high dogmatic students will show with greater frequency an increase in change in affective behavior in the closed teaching treatment,

(b) and the low dogmatic students will show with greater frequency an increase in change in affective behavior in the open teaching treatment.

Method

To test the hypotheses stated, a 2 by 2 by 3 analysis of variance design was used in this study. Teaching treatment (open versus closed) and dogmatism level of the students (high versus low) were the main independent variables being studied in terms of their effect on change in knowledge and affective behavior about a culture of a country, India. The possible variation in outcome due to the three different teachers was controlled by treating teachers as a third independent variable. A third independent variable was students' liking of teaching styles.

Design Control

One of the control aspects of this study is contamination of information flow from the open teaching treatment to the closed teaching treatment and vice versa. Ideally, the S_s should not mingle until after the study data are collected. This was not possible here because the study lasted for five (5) weeks using twelve (12) class sections including a control section in East Lansing High School, and one (1) control section in Okemos High School. The subjects will mingle not only with their classmates both with the community-at-large. This free intermingling of the S_s is a common aspect found in any field study. However, specific questions were utilized to check on how much contamination might occur and the source or sources from which it might originate.

Also, three (3) different teachers were used in this study. The way each one approaches each teaching treatment and brings his or her personality and teaching techniques to them may have an influence on all the variables to be tested, another contaminating influence. To take this into account, the three (3) teachers were handled as a third independent variable.

Focusing specifically on the two teaching treatments, the following control techniques were employed:

(1) The length of study for all the experimental class sections was five (5) weeks; four (4) days per week.

(2) The amount of time per day for all the experimental class sections was seventy (70) minutes per class section per day.

(3) Each of the three (3) experimental teachers taught both the open and the closed teaching treatments.

(4) All the experimental instructional materials used in each teaching treatment were given relatively equal time attention.

(5) Each experimental teaching treatment was held at a specific hour each day for that specific teaching treatment:

closed teaching treatment	open teaching treatment
A hour each day.	D hour each day.
B hour each day.	E hour each day.

The closed teaching treatment was held in the forenoon to reduce the sensory channel contamination (smell of food, incense, etc.) from the open teaching treatment because only one classroom per teacher was used for all the students.

The fatigue factor should be allowed to operate equally between the two teaching treatments, but this was not possible if sensory contamination were to be minimized. Thus, a random ordering of the teaching treatments was not possible.

(6) Each experimental teaching treatment was held in the same school and the same classroom by the same teacher each day.

(7) All three (3) teachers in the experimental teaching treatments were given identical instructions by the experimentor on the proper mode of operation of the open and the closed teaching treatments and the proper application of the teaching materials to each teaching treatment.

(8) The three classrooms used for the experimental teaching treatments were identical in physical environmental conditions.

(9) All three teachers had no prior specialized training or experience in theatre teaching techniques. They were experienced classroom teachers with relatively equal teaching abilities and length of overall teaching time in the classroom.

(10) Each experimental teaching treatment used the same plays of India as the basis for the cultural concepts under investigation.

(11) Each experimental teaching treatment used A. L. Basham's book, The Wonder That Was India (2), as the standard reference for interpretation of the cultural concepts of India found in the plays of India.

While other variables connected with the teaching treatments may have been present, it is assumed that these effects were randomly distributed across the two teaching treatments.

Justification of Using Plays of India to the Study

While we might use a variety of content to test the main proposition set forth in this study, three (3) factors led to the selection of Indian plays:

(1) Content is relevant to significant international relations.

(2) Content is that to which U.S. students have been minimumly exposed.

(3) Content is of sufficient complexity to permit

testing the behavior change expected.

In reference to the first factor, the U.S. has committed itself to increasing involvement with foreign countries around the world through financial assistance and educational programs. The fact that India is the world's largest democracy with the second largest population in the world makes our commitment there greater and more significant in international relations. According to Arnold, this has been a prime motivational factor in U.S. assistance to India:

> The threat by a less developed country that it would turn to the communists or even 'go Communist' was enough to bring the U.S. hurrying with promises of aid (or greatly increased aid) and other inducements (1).

India by the very nature of its neutralism and its strategic proximity to Red China's borders has held a position of favoritism with Russia, also. Arnold further states:

> India, on the other hand, has always occupied a position of first-class importance in Soviet aid policy since it is the biggest and (most would agree) the leading exponent of the policy of neutralism, and therefore needs to be courted. It has occupied a similar position in Western aid plans (1).

Some of this U.S. foreign aid money helps to finance the educational costs of the foreign students who are studying in our colleges and universities. In this regard, India ranks second to Canada in number of students studying in the U.S.A. (10). These foreign students bring to the U.S. varied cultural values of their respective countries, and many U.S. adolescents come in contact with them. If they are to better understand the cultural values of these people from other cultures, they need to begin to study them in the U.S. public and private elementary and secondary schools.

As for the second factor for the selection of Indian plays, it seems plausible to assume that U.S. school children have a minimal exposure to foreign cultural patterns of life because in the past we have not been duly aware of our world neighbors' cultural habits, or even begun to study them to any significant degree in the U.S. classroom.

Where do we start to develop better understanding of our foreign neighbors? It seems plausible to begin with our own school children. They will be our future citizens, and what they learn about foreign peoples' cultural beliefs will shape their understanding of them and help them hopefully to build a better world on the basis of facts, not fantasies.

Plays of India with their wealth of Indian cultural concepts would lend themselves quite readily to the study of cultural concepts in the U.S. classroom as we investigate a teaching process which involves play production.

Basham (2) points out that the content of Indian plays offers x number of concepts of significant complexity related to the values, attitudes, and behaviors of the people of India. The plays selected for this study contain enough of these cultural concepts so as to permit testing the behavior change expected in the U.S. students who study them. By the technique of pretest-posttest questionnaires containing the same specific questions in each one on the same cultural concepts, it should be possible to ascertain the relative amount of students' behavioral change between the two teaching treatments, and for each of the treatments.

Centrality of the Plays of India to the Study

Specifically, teaching content of this study is centered

on three plays of India. These plays are: (1) The Priest and the Prostitute (Sanskrit drama), Bawa No Vesh (folk or village drama), and Summer Shower (contemporary drama). They were chosen because they present an overall sampling of some of the important social and cultural aspects of Indian life from the ancient Aryan civilization to present day life in modern India, in the city, and in the village. Their content offers for ninth grade high school students an understandable point of reference from which they can assimilate relevant social and cultural values of Indian life in a context of change contrasting the traditional way of life against the effects of modernization on present day India.

Ideally, one learns the culture of a country by living it. This is impossible for most persons from another country. The alternative which seems to offer the most feasible substitute is to experience the culture through dramatized aspects of the culture. This study is an attempt to measure the relative impact of two types of student involvement with Indian theatre.

Research Setting

An opportunity to test our hypotheses arose during January and February of 1970 at East Lansing High School, East Lansing, Michigan. All ninth grade English classes, including one for control purposes, were utilized. Four teachers took part in the study at East Lansing High School; Mrs. Green, Mrs. Smucker, and Mr. White taught the experimental sections, and Mrs. Hinton had the control section. As an additional check on contaminating influences, a control class at Okemos High School, Okemos, Michigan was also used. Mrs. Fenkel was the control teacher there.

Operational Definitions of the Concepts

The data for this study were gathered by the means of a set of questions on knowledge and affective behavior administered immediately before and after the students studied the unit on India. Measurement of the phenomena conceptualized was done by means of the following operationalizations.

Teaching Treatments. A daily schedule of the classroom procedures was followed by each teacher in each experimental class section of each teaching treatment. The differential nature of the activities undertaken by the students in their respective teaching treatments (open-closed) was our operational definition of the two teaching treatments. Operationally, we can say that students in the open teaching treatment produced Indian plays in the classroom; while students in the closed teaching treatment did not produce Indian plays in the classroom.

Dogmatism. Dogmatism was measured by means of the Short Form (Trodahl and Powell (16)) of the Rokeach Dogmatism Scale. A median split of the scores was used to designate S_s as open or closed minded. A Chi-square test revealed no significant difference overall in dogmatism levels between the experimental and control groups.

Knowledge Gain. Knowledge measures were obtained from specific questions on Indian culture. Scoring was done by summing across all the students' number of right answers on their before-after questionnaires. Change between the before-after right answer scores in the direction of more correct answers, we can say a knowledge gain had occurred.

Change in Affective Behavior. Affective behavior measures

were obtained from social distance questions. Scoring on "yes"-"no" questions was done by summing across all the students' number of "yes" responses on their before-after questionnaires. Change between these before-after "yes" responses provided one measure of change in affective behavior. On the scale questions, the social distance values ranged from 0 (lowest) to 6 (highest).

Also, Osgood's seven-point semantic differential scale was used. Scores on the semantic differential items were obtained by adding the individual scale scores for each concept. A shift or change in scores in the direction of the highest value (7) on the semantic differential scale, we can say a predicted change in affective behavior had occurred.

Student Preference for Teaching Treatments. A student preference measure for the open or the closed teaching treatment was obtained from item questions. Scoring was done by summing across all the students' responses to the four (4) items which ranged from "I liked it very much" to "I did not like it" on their after-only questionnaire. The response item which received the highest percentage of positive overall student responses for a particular teaching treatment (open-closed) we can say a preference for that particular teaching treatment had occurred.

Manipulation Checks

Two manipulation checks were employed so we can know if the information inputs and the activities manipulated in each of the teaching treatments (open-closed) had a differential effect on the students involved.

Awareness of Sensory Channels. A sensory channel

measure was obtained from an item question. Scoring was done by summing across all the students' responses to the number of their sensory channels activated. By comparing frequency counts of the responses in each teaching treatment (open-closed), we can ascertain which teaching treatment had a greater awareness of sensory channels for the students involved.

Perception of Feedback and Interaction. Perception of feedback and interaction measures were obtained from scale questions. A four (4) point preference scale was used. It ranged from 1 (very often) to 4 (never). Scoring was done by summing across all the students' responses as to the degree of their perception of feedback and interaction. By a frequency count of their responses in each teaching treatment (open-closed), we can ascertain which teaching treatment had a greater perception of feedback and interaction for the students involved.

Sample Design

The data to test our hypotheses were gathered from intact groups, where teachers were willing to cooperate, of all students enrolled in the ninth grade English classes at East Lansing High School, East Lansing, Michigan.

Also, no attempt to select the teachers on the basis of special skills in theatre teaching techniques was considered, only their overall abilities as classroom teachers. However, the dogmatism test was administered to the teachers as a means to determine the dogmatism level among them. All three teachers were below the median of the student scores.

Furthermore, this investigation did not attempt to use the selected Indian plays as a literary study of their stylistic or

aesthetic merits. They were used solely for the purpose of focusing on the specific Indian cultural concepts relevant to the students' better understanding of some concepts of life in India.

Subsequently, the production of plays in the classroom did not strive to reach artistic perfection. The function of the theatre technique was to serve as a means by which the students' can hopefully learn about life in India by being involved in dramatized human experiences.

Art films were not used in this study. There are two reasons for this decision. The rental cost was prohibitive, and our purpose here is not to determine if student involvement in imaginative art films is a more powerful means to effective learning than student involvement in student produced classroom plays.

However, documentary films were used. Costwise, they were not prohibitive, and their contents seemed to be appropriate as a supplemental reference to the cultural concepts studied in the Indian plays.

This study was not an exercise in creative dramatics. All the play scripts were written by professional playwrights. The students merely used the play scripts as a means to study the selected cultural concepts of India by staging the plays themselves in the classroom, or to learn about India by reading and discussing the plays in class.

How the Plays were Produced in the Classroom

All three Indian plays were student directed and produced in the classroom in the open teaching treatment. The teacher served as a coordinator of the various playmaking activities,

and the production activities were organized into committees. These committees were: (1) acting committee, (2) staging and props committee, (3) costume committee, (4) make up committee, (5) music and sound effects committee, and (6) ritual committee.

The students chose the committees they wanted to serve on; however, they could not be on just one committee for all the plays. They could act in all three plays, but they, also, had to serve on a committee other than acting. The converse operated for those who wanted to be on a nonacting committee. They had to act in one play.

A student director was chosen by a consensus vote of the committees for each play. The assistant director was chosen by the same method. Heads of each committee were chosen by the same method. Heads of each committee were chosen by the same method within each committee.

The students worked out a production-rehearsal schedule for each play. It was the duty of each committee head to see that his production schedule was met on time. The assistant student director was a liaison between the student director and the committee heads. The student director supervised the entire production, including the rehearsing of the cast.

Dress rehearsals were held prior to the production of the plays. Students not presenting their plays were the audience for the play being staged. Students from the closed teaching treatment were not to see the plays; however, this control technique may have been violated.

The plays were staged in the confines of each experimental teacher's classroom. These classrooms had identical physical environments. No elevated stage was used. The floor at one end

of the classroom was the stage area, and the audience sat on the floor in a circle around the stage. This helped to give a more authentic Indian quality to the plays because this is a frequently used method of staging plays in India in order to create a more "intimate" relationship between the actors and the audience.

The ritual effect of having the audience eat Indian food before the play started was observed. Also, the burning of incense and the playing of Indian music (religious ragas) was a part of this ritual.

No specific stage lighting was used, only the indirect lighting of the classroom fixtures. Hopefully this helped to approximate the effect of sunlight, because plays in India are frequently staged out-of-doors in the daytime. This would have been impossible to do here because of the winter weather. Also, we wanted to maintain the classroom environment as an essential part of the learning process.

Stage props were stylized. They merely suggested a tree, a flower, etc. This was in keeping with the Indian tradition of staging plays.

The costumes and make up were appropriate to the caste of the particular character. For example, the prostitute in the play The Priest and the Prostitute was dressed in pink, a color symbolic of her rank and occupation.

Data Collection Procedures

Data for this study were collected during the last week of January and the four (4) weeks of February, 1970 at East Lansing High School, East Lansing, Michigan and Okemos High School, Okemos, Michigan. Also, a pretest of the data collecting questionnaire

was administered at Okemos High School, Okemos, Michigan as a check on response problems, i.e. to determine if some questions on the questionnaire were too sophisticated in content to be comprehended by ninth grade level students, to determine if the wording of the questions was too sophisticated to be comprehended by the students, etc. This was done about six (6) months prior to the beginning of the actual study. It was administered to a ninth grade music class so the questionnaire content could be checked in a classroom setting using an intact group of students which would closely approximate the actual classroom setting used in the study. Mr. Koehn administered the pretest questionnaire check.

On the first day of the study, all students (experimental and control) in East Lansing High School, East Lansing, Michigan were administered a dogmatism questionnaire and pretest questionnaire to ascertain the level of dogmatism of each student and each students' knowledge level on India and his affective behavior toward India at the beginning of the study. The three (3) experimental teachers were administered the dogmatism questionnaire only as a check on the dogmatism level among them.

At the end of the study (five (5) weeks later) a post-test questionnaire was administered to all the experimental and control students to determine if each student's level of dogmatism had a relational effect on his amount of knowledge gain on India and his degree of change in affective behavior toward India dependent on his teaching treatment.(open-closed).

Also, at the same time (five (5) weeks later) an after-only questionnaire was administered to all the experimental class sections to determine if the manipulation checks on

awareness of sensory channels and perception of feedback and interaction were more distinguishable in the open or the closed teaching treatments. Furthermore, this questionnaire was used as a check on contaminating effects among the experimental class sections.

The after-only questionnaire for the control class section at East Lansing High School was administered at the same time (five (5) weeks later) as a check on any contaminating effects which might occur from outside sources as well as the experimental class sections.

The same procedure and for the previously stated reasons was followed for the control group at Okemos High School, Okemos, Michigan, except that the after-only control questionnaire was administered instead of the after-only experimental questionnaire. This was done as a check on any contaminating eggects which might occure from the experimental class sections in the East Lansing High School.

Data Analysis Procedures

The data, once collected, were coded for computer processing. Student dogmatism scores were computed by summing the scores on the twenty (20) items for each student. Students were divided into high and low dogmatism groups by selecting those above the median for all students as high dogmatics, and those below the median as low dogmatics.

Frequency counts were run of the students' scores (experimental and control) on all the questions of the questionnaires. Means and standard deviations were computed for each cell of the study design.

Once this was done, the data were cross-tabulated to provide

the necessary combinations of data to examine the relationships hypothesized between and within our various predictor and criteria variables. These data provided the basis for hypothesis-testing.

Statistical Tests

Analysis of variance was used to test hypotheses two (2) and three (3); and Chi-square was used to test hypothesis one(1). Sign tests also were used to test for the statistical significance of the number of persons changing in the predicted direction for each of the teaching treatments and the dogmatism levels.

Results

After a brief resume of the findings, the data used to test the three hypotheses will be presented. Briefly, the findings reveal:

(1) That, overall, the students preferred the open teaching treatment to the closed teaching treatment.

(2) No statistically significant differences in knowledge gain or change in affective behavior were found between students in the open teaching treatment and those in the closed teaching treatment. However, students in both teaching treatments showed significant gains in knowledge. They did not show significant changes in affective behavior; about as many became less favorable in their beliefs about India as became more favorable, and about the same number did not shift.

(3) Based on knowledge gain in control classes in East

Lansing High School and Okemos High School, it appears that just student interaction in East Lansing High School was an effective means to knowledge gain. The East Lansing control class section showed a knowledge gain which was significant at the 0.05 level, compared to significance at the 0.01 level for knowledge gain for the East Lansing experimental class sections.

However, the Okemos control class section showed essentially random shifts in knowledge gain.

Student Preference for Teaching Treatments. The Chi-square test of data reported in Table 1 below shows a statistically significant preference for the open teaching treatment, regardless of the students' level of dogmatism.

Table 1. Preference for open and closed teaching treatments by high and low dogmatic students.

Teaching Treatment Dogmatism Level	Degree of Liking or Disliking: 1 liked it very much No.	%	2 liked it somewhat No.	%	3 liked it very little No.	%	4 did not like it No.	%	TOTAL No.	%
Open High Dog.	9	25.7	17	48.6	4	11.4	5	14.3	35	100
Open Low Dog.	11	25.6	17	39.5	7	16.3	8	18.6	43	100
Closed High Dog.	5	8.6	28	48.3	17	29.3	8	13.8	58	100
Closed Low Dog.	3	5.6	21	38.9	16	29.6	14	25.9	54	100

N=196

$x^2 = 19.313$, x^2 of 16.92 significant at 0.05 level, df = 9

A further analysis of the Chi-square test of data reveals

a statistically significant disliking by the low dogmatic students for the closed teaching treatment. Table 2 reports these data.

Table 2. Percentage of students by dogmatism level who dislike the teaching treatment in which they participated

	Teaching Treatments	
Dogmatism Level	Open	Closed
High Dog.	14.3	13.8
Low Dog.	18.6	25.9

$x^2 = 4.2498$, x^2 of 3.84 significant at 0.05 level, df = 1

The data in the cells show the percent who said they did not like the teaching treatment to which they were exposed.

From the student levels of dogmatism, we can make the following observation: both the high and the low dogmatic students preferred the open teaching treatment, 25.7% of the high dogmatics and 25.6% of the low dogmatics said "they liked it very much;" while only 5.6% of the low dogmatics and 8.6% of the high dogmatics in the closed teaching treatment said, "they liked it very much." It is noted that a significant proportion, 25.9% as shown in Table 2, of the low dogmatic students disliked the closed teaching treatment.

Knowledge Gain. Overall, the analysis of variance showed no statistically significant difference in knowledge gain between the teaching treatments, or between student levels of dogmatism. Table 3 contains these data.

Table 3. Analysis of variance for difference in knowledge gain between teaching treatments by dogmatism level and by teacher.

	ss	df	ms	F	Sign.
Btn. A	2.882	1	2.882	0.0829	0.774
Btn. B	21.867	2	10.934	0.3145	0.713
Btn. C	56.812	1	56.812	1.6341	0.203
A B	45.191	2	22.595	0.6499	0.523
A C	44.796	1	44.796	1.2885	0.258
B C	7.845	2	3.923	0.1128	0.893
A B C	45.225	2	22.613	0.650	0.523
Error	6397.211	184	34.767		
Total	6674.347	195			

A = open versus closed teaching treatments.

B =teacher 1, 2, and 3.

C = high versus low dogmatism.

In Table 4 following, sign tests for all the experimental groups and the East Lansing control group showed statistically significant knowledge gains, regardless of teaching treatment, or levels of student dogmatism.

Table 4. Number of students who changed in knowledge level by teaching treatment and dogmatism level.

Teaching Treatment Dogmatism Level	Direction of Change			
	In-creased	De-creased	No change	Total
Open High Dog.	33	3	0	36
Open Low Dog.	43	1	1	45
Closed High Dog.	56	4	1	45
Closed Low Dog.	50	4	0	54
E.L. Control High Dog.	4	1	1	6
E.L. Control Low Dog.	11	3	0	14
Oke. Control High Dog.	5	7	1	13
Oke. Control Low Dog.	4	4	0	8
Total	206	27	4	237

Probabliity of shifts of this magnitude is beyond 0.001 level.

Change in Affective Behavior. The first measure of affective behavior was the social distance scale. This scale measured the students' reaction to social situations in which they might be personally involved with people from India.

Table 5 shows that by isolating those students who did show a change in direction, we find that Rokeach's "resistance to change" aspect of high and low dogmatism may be operating. A greater number of high dogmatic students tended to shift toward a less favorable view of India, and a greater number of low dogmatic students tended to shift toward a more favorable view of India. However, these differences did not reach the 0.05 level of statistical signigicance.

Table 5. Direction of shift on social distance measure by high and low dogmatic students.

Dogmatism Level	Direction of Change			
	Increased	Decreased	No Change	Total
High Dog.	23	33	41	97
Low Dog.	31	26	42	99
Total	54	59	83	196

Table 6 shows shifts in social distance scores for each of the dogmatism - teaching groups. Overall, about as many became less favorable, and a larger number did not shift. Again no statistically significant differences in direction of change were found.

Table 6. Number of students who changed in affective behavior by teaching treatment and dogmatism level.

Teaching Treatment Dogmatism Level	Direction of Change			
	In-creased	De-creased	No Change	Total
Open High Dog.	9	12	15	36
Open Low. Dog.	13	12	20	45
Closed High Dog.	14	21	26	61
Closed Low Dog.	18	14	22	54
E.L. Control High Dog.	1	1	4	6
E.L. Control Low Dog.	4	4	10	18
Oke. Control High Dog.	5	2	6	13
Oke. Control Low Dog.	0	1	7	8
Total	64	67	110	241

The analysis of variance reported in Table 7 following showed no statistically significant difference in change in affective behavior on the social distance measure between the teaching treatments, or the student levels of dogmatism. Although none of the F values reached the 0.05 level the value for difference in dogmatism levels approached the 0.05 level. It was 0.066.

Table 7. Analysis of variance for change on social distance measure.

	ss	df	ms	F	Sign.
Btn. A	1.871	1	1.871	0.6712	0.414
Btn. B	5.293	2	2.646	0.9494	0.389
Btn. C	9.529	1	9.529	3.4184	0.066
A B	8.139	2	4.069	1.4599	0.235
A C	0.009	1	0.009	0.0034	0.954
B C	10.431	2	20.046	0.3428	0.710
A B C	13.525	2	6.762	2.4260	0.091
Error	512.929	184	2.787		
Total	567.530	195			

A = open versus closed teaching treatments.
B = teacher 1, 2, and 3.
C = high versus low dogmatism.

On the semantic differential measure one: beliefs about India, analysis of variance revealed no statistically significant difference in change in affective behavior between teaching treatments, or student levels of dogmatism. This is reported in Table 8.

Table 8. Analysis of variance for change in affective behavior on semantic differential measure one: beliefs about India.

	ss	df	ms	F	Sign.
Btn. A	40.431	1	40,431	0.6914	0.407
Btn. B	28.126	2	14.063	0.2405	0.786
Btn. C	65.031	1	65.031	1.1121	0.293
A B	51.284	2	25.642	0.4385	0.646
A C	61.523	1	61.523	1.0521	0.306
B C	40.093	2	20.046	0.3428	0.710
A B C	156.544	2	78.272	1.3386	0.265
Error	10759.436	184	58.475		
Total	11298.994	195			

A = open versus closed teaching treatments.
B = teacher 1,2, and 3.
C = high versus low dogmatism

Considering the semantic differential measure two: beliefs about the Indian Priests, the analysis of variance again shows no statistically significant difference in change in affective behavior attributable to teaching treatment, or student levels of dogmatism found in Table 9.

Table 9. Analysis of variance for change in affective behavior on semantic differential measure two: beliefs about the Indian priests.

	ss	df	ms	F	Sign.
Btn. A	3.109	2	10.933	0.0591	0.808
Btn. B	145.176	2	72.588	1.3794	0.254
Btn. C	4.339	1	4.339	0.0825	0.774
A B	207.328	2	103.664	1.9700	0.142
A C	32.376	1	32.376	0.6153	0.434
B C	46.431	2	23.215	0.4412	0.644
A B C	28.975	2	14.487	0.2753	0.760
Error	9682.550	184	52.622		
Total	10190.749	195			

A = open versus closed teaching treatments.
B = teacher 1, 2, and 3.
C = High versus low dogmatism.

Manipulation Checks

Awareness of Sensory Channels. In order to determine if the students perceived the number of sensory channels employed in each of the two teaching treatments, percentages were computed of the students' responses to an item question on each of the teaching treatments. By comparing the percentages of "yes" responses for each sensory channel employed in the open and closed teaching treatments in Table 10, we can see that the manipulation of the awareness of sensory channels variable was successful.

Table 10. Percentages and frequency of students reporting use of each sensory channel by teaching treatment.

Sensory Channels	Teaching Treatment: Open Yes	Open %	Closed Yes	Closed %
Sight	68	72.3	90	67.6
Sound	63	66.3	85	64.3
Touch	45	47.8	9	13.8
Smell	56	59.5	30	21.1
Taste	54	57.4	16	12.0
Tonic	37	38.1	5	07.6
Total	323	341.5	235	186.4

In the yes column under the closed teaching treatment, the relatively high percentages for the sensory channels of smell and taste may be attributed to the closed teaching treatment students mingling with the open teaching treatment students between class breaks to taste the Indian food and to smell the incense.

Table 11 shows the students' degree of awareness of the number of sensory channels employed in each teaching treatment. It can be seen from the percentages that the open teaching treatment had a higher overall degree of awareness for the students involved than those students in the closed teaching treatment.

Table 11. Percentages and frequency of the students' degree of awareness of the number of sensory channels employed in each teaching treatment.

Number of Sensory Channels Employed	Teaching Treatment: Open No. of channels checked by students	%	Closed No. of channels checked by students	%
1	2	02.1	20	14.8
2	2	02.1	55	40.7
3	14	14.8	15	11.1
4	12	12.7	8	05.9
5	19	20.2	3	02.2
6	23	24.3	1	00.7
Total	72	76.3	102	75.4

In closed about 55% reported using 1 or 2 channels; while in open 55% reported using 4, 5, or 6 channels.

Perception of Feedback and Interaction. The effectiveness of the perception of feedback and interaction manipulation was assessed by computing the percentages of students' responses within each experimental group who perceived the experimental induction. These percentages are reported in Table 12. The figures in this table indicate that by comparing the percentages in each teaching treatment, we can see the manipulation was not successful. About as many students in the closed teaching treatment indicated a relatively high degree f feedback and interaction as those in the open teaching treatment.

Table 12. Percentages and frequency of feedback and interaction perceived by the students in each teaching treatment.

Questions 14-17	Teaching Treatment No. (Open)	%	No.(Closed)	%
Q.14 Did the teacher let you express your views?				
1. very often	30	31.9	39	29.5
2. fairly often	20	21.5	54	40.9
3. not very often	20	21.5	8	06.2
4. never	5	05.1	4	03.0
No response	19	20.0	27	20.4
Total	94	100	132	100
Q.15 Did your classmates let you express your views?				
1. very often	27	30.4	32	24.4
2. fairly often	27	30.4	58	44.2
3. not very often	11	12.3	14	10.9
4. never	5	05.6	1	00.7
No response	19	21.3	26	19.8
Total	89	100	131	100
Q. 16 Did you let the teacher expres his or her views?				
1. very often	46	49.5	71	53.7
2. fairly often	21	22.5	25	18.9
3. not very often	6	06.5	8	06.3
4. never	1	01.0	2	01.5
No response	19	20.5	26	19.6
Total	93	100	131	100
Q. 17 Did you let your classmates express their views?				
1. very often	46	49.4	52	39.3
2. fairly often	22	23.6	47	35.6
3. not very often	4	04.3	3	02.3
4. never	2	02.3	3	02.3
No response	19	20.4	27	20.5
Total	93	100	132	100

Discussion

What May We Conclude From This Study? As previously stated, one of the most difficult control aspects of this study was to try to avoid contamination of treatment groups due to information flow from the open teaching treatment to the closed teaching treatment, and vice versa. The data indicate that information flow through student interaction was an effective contributor to knowledge gain for all the experimental and control groups in East Lansing High School. More effective means of isolating the East Lansing experimental and control groups would have been desirable; however, this was virtually impossible in a normal school operation. The results do demonstrate a high degree of student learning through student interaction outside the classroom as well as inside the classroom in any learning process.

One of the aspects of this study was to see if selected cultural concepts of India could be taught to U.S. students in a classroom learning environment. The data supported this aspect. In general, the majority of the students increased their knowledge on India.

Unquestionably the majority of the students, regardless of their dogmatism levels, including the experimental teachers, expressed a preference for the open teaching treatment. Students, in general, seem to prefer a teaching style which offers a wider range of sensory stimulation, the potential for optimum feedback and interaction, and personal involvement in dramatized human experiences. The play production used in the open teaching treatment provided this wider range of stimulation.

This study revealed no significant relationship between teaching treatments, and students' knowledge gain and their change in

affective behavior toward India for either high or low dogmatic students. There could be salient reasons for this.

The dogmatism test may not have accurately tapped important internal student variables, i.e. isolating opinions, attitudes, and beliefs, etc. which may have been operative. If this is true, the dogmatism scores may not have been an accurate reflection of relevant individual differences.

Also, as Costin (6) points out, the "more-than-one-kind-of-dogmatism" hypothesis could be relevant here. Dogmatism may be differentially related to classroom learning, depending on the particular nature of the learner's dogmatism, and its relevance to the kind of learning tasks he pursues. If there is more than one kind of dogmatism operative here, a variety of instruments is required to measure it more accurately.

Considering the teaching treatments, perhaps their conceptualizations and their inputs of information and manipulative activities were not of such a nature as to effectively test influence of the varying levels of student dogmatism on behavior change resulting from these inputs. If more than one kind of dogmatism was operative, the teaching inputs may have immediately affected only a certain number of students, which were not put into a single category by our measures.

Time, also, may be important here. Costin (6) maintains that over a period of time certain students of varying levels of dogmatism who showed no change in attitude at the conclusion of the induction of the information inputs, did show a change in attitude on the information inputs six months later.

Attitudinal effects of messages are frequently delayed (15). This might be a further explanation for the lack of more immediate change in affective behavior by those students who did not shift

on the social distance measure. The experimental teachers maintain this is reasonable. They believe change to be more persistent over time in the open teaching treatment. The only way we could test this speculation would be to retest all the East Lansing experimental students on the change in affective behavior measures at a later time.

Another relevant factor might be the relative restrictive-unrestrictive nature of the two teaching treatments. Student comments attest to the fact that several students in the closed teaching treatment considered it "deadly" and "boring"; while several students in the open teaching treatment considered it "too fast moving to be able to adjust to what was going on." A check of their dogmatism scores showed a random spread of high and low dogmatism levels in each teaching treatment. Therefore, we can only speculate that other individual differences are operative here, i.e. intelligence levels of the students, etc., which could have affected their reactions.

These students in both teaching treatments may have put up defense mechanisms (12). They could have "turned off" rather than becoming involved in the content of the learning process. By doing this, their desire to learn about Indian cultural concepts diminished because they may have considered the learning activities to be relatively unimportant to reduce the possible high degree of frustration over the experimental tasks.

Janis and Mann (11) tried to show that persons who actively verbalize the content of messages in a role-playing situation will demonstrate greater attitude change in the direction of the messages than those who only passively listen to them. This prediction was not supported in this study. The semantic differ-

ential measure number two: beliefs about Indian priests showed no statistically significant difference between the teaching treatments.

We can only speculate here. It may be that any kind of verbalization, whether question and answer (closed teaching treatment) or role-playing (open teaching treatment) induces ego-involvement and change. Perhaps change in the closed teaching treatment might be produced by the students' vicarious involvement with the characters in the plays; whereas, change in the open teaching treatment might be produced by the students' active involvement with the characters.

Again the time factor could be relevant here. If attitudinal effects of messages are frequently delayed, we might reason that the students' more personal involvement with the characters through role-playing activities might make change more persistent for them over time. This can only be determined by retesting all the experimental groups in East Lansing at a later time. The same rationale might be applied to the semantic differential number one: beliefs about India.

Considering the manipulation checks, students in the open teaching treatment reported using more sensory channels than did students in the closed treatment. The data supported our contention that playmaking activities bring into operation a greater number of sense organs for varied sensory stimulation for the participants involved.

However, the data showed that the manipulation check on student perception of feedback and interaction was relatively the same for both teaching treatments. We might speculate that this may be due to the overall nature of the established teaching

practices of the experimental teachers. In a questioning session with them by the researcher, they said that they encourage in their regular classes a free exchange of feedback and interaction among the students and themselves. This could have presensitized the students to this operational mode of learning, and made it difficult to establish the more restrictive interaction style which was sought for in the closed teaching treatment.

What Are the Implications From This Study? Both treatments produced significant knowledge gain; however, student preference for the open teaching treatment suggests it may be a more effective teaching style.

It seems plausible that the open teaching treatment may be effectively used with several disciplines; such as, English and American literature, history, sociology, psychology, or any subject area which has as its content the behavioral nature of man and his social and cultural environment.

Perhaps the open teaching treatment would be more applicable in most schools because of its overall student-teacher preference; nevertheless, the closed teaching treatment might be preferred in schools of a relatively conventionally structured learning environment, and where the goal is to cover a large amount of content quickly.

Even though this study revealed no statistically significant difference in knowledge gain and change in affective behavior toward India between the two teaching treatments and the student levels of dogmatism, it should be replicated in various schools with students of different socio-economic backgrounds, i.e. an urban school, a rural school, an inner city school, etc. Hopefully, this would give a more representative sampling of students with

belief-disbelief systems of varying degrees than was possible in the present study.

A way to more effectively control contamination effects would be to replicate each teaching treatment separately in different schools, with efforts to equate the students in the different schools on the dimensions being studied.

The persistence of attitudinal effects of messages over time needs to be tested more extensively. A way to test this variable would be to use the open teaching treatment (this choice is based on student-teacher preference for it) for a period of,say, three months. This would allow the students to participate extensively in verbalized role-playing experiences.

Attitude theory maintains that the more actively an individual involves himself in the role he is playing, he should acquire more of the attributes of that role. Now if these attributes persist over time, significant behavioral change might result from this teaching approach.

Another study in this area would be to see if the professional productions of the Indian plays have a greater effect on student learning and change in affective behavior than the amateur student productions of them. This would be carried out in a classroom setting.

In the professional productions, the students would view the Indian plays; whereas, in the amateur productions, the students would actively participate in playmaking activities. This approach would test Dale's (7) claim that both playseeing and playmaking are effective means to student learning, and we may be able to determine which approach, if either approach, is more effective in producing this learning and attitude change.

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APPENDIX "A"

Synopsis: "The Priest and the Prostitute"

The title of the play literally means a saint and a concubine of a higher order. It has a delightful theme: the exchange of their souls so they can momentarily live the life and the views of each other until they are restored again to their original selves.

The soul transformation offers the playwright opportunities to discuss various views on love, religion, intellectual enlightenment, spiritual meditation, sensuality, and the social institutions appropriate to the ancient Indian aristocratic society from the point of view of a Brahmin priest and a lower caste courtesan-concubine.

Synopsis: "Bawa Ne Vaah"

This play's action centers on the hap-hazard efforts of Bawa to build a temple in a rural village. He and his pupil, Mohanio, have come to the village on their pilgrimage. They are hungry. The simple villagers, honored by the presence of a knowledgable priest among them, openly cater to all of Bawa's wishes. However, Bawa is not very interested in building a temple for these simple, trusting people because of his desire to seduce the young village women. He succeeds in marrying two of them leaving the villagers with a rather disillusioned view of their Bawa.

Though the action of the play is farcical, the theme is serious. It reiterates the basic hypocracy in all men. Yet the play in no way shows contempt for the priest or the Indian socio-religious order. It merely uses the situation to highlight a basic fact: all men are human, even priests, with the basic weaknesses of ordinary men.

Synopsis: "Summer Shower"

An important aspect of this play is the effects of change through modernization upon the traditional social and cultural values of ancient India within the context of contemporary, urban life.

Human misunderstanding is the play's theme. All the members of the Babu family have difficulty in understanding each other's views, or the roles they should play. As a result, a "communication gap" developes between Khoka and Sarama, Sarama and her husband, Prasanta, and Khoka and his sister. Fortunetely this is finally resolved by the humbling of all concerned, and their desire to accept the basic individuality of each other so an atmosphere of trust and understanding is achieved.

A P P E N D I X " B "

Questionnaire Form BBBB

1. A family in India has a high degree of respect for each person in the family unit.

___Yes
___No
___Don't know

2. The family mother in India is the major influence on the rearing of

___sons
___daughters
___neither

3. The family father in India is the major influence on the rearing of

___sons
___daughters
___neither

4. Members of a family in a modern city in India have the same personal problems as members of a family in a modern U.S.A. city.

___Yes
___No
___Don't know

5. In a family in India, a daughter is taught to be pleasurable to men.

___Yes
___No
___Don't know

6. In a family in India, a son is taught to be respectful.

___Yes
___No
___Don't know

7. In a marriage in India, the having of children is a religious necessity for the husband.

___Yes
___No
___Don't know

8. Pleasurable love is a more vital aspect for happiness in a marriage in India than a marriage in the U.S.A.

___Yes
___No
___Don't know

9. Among the peoples of India, physical pleasures are rooted in Nature.

___Yes
___No
___Don't know

10. It is possible for a Brahmin (person in highest caste) to marry outside his caste just as an American can marry outside his social class in the U.S.A.

___Yes
___No
___Don't know

11. Historically, prostitution has been held in high regard in India.

___Yes
___No
___Don't know

12. The various kinds of priests in India feel they enjoy high positions of respect in their societies.

___Yes
___No
___Don't know

Questionnaire Form BBBB

13. In the religions in India, individual meditation is more important than physical needs; such as, food, drink, etc.

___Yes
___No
___Don't know

14. Gardens and ornaments (jewelry) were important elements in creating an atmosphere for love in ancient India.

___Yes
___No
___Don't know

15. The actions of the priests in India are more controlled by the physical needs and desires of ordinary men than by religious meditation.

___Yes
___No
___Don't know

16. The long survival of the culture in India is due to its strong belief in tolerance for peoples of other cultures who have invaded the country over the centuries.

___Yes
___No
___Don't know

17. The caste system in India is being destroyed today because of: (please check as many of the following as apply).

___democratic nature of the country
___education
con't. at top of page

17. con't.

___technology
___freedom of women
___modernization
___increasing number of new jobs
___movement of people to cities

18. To what extent would you say that the cultural values of India are better suited for a happy life than U.S.A. cultural values?

___Very much better than U.S.A.
___Somewhat better than U.S.A.
___Somewhat worse than U.S.A.
___Very much worse than U.S.A.

19. How fair to the individual is the caste system of India?

___ Absolutely fair
___ Fair
___ Don't know
___ Unfair
___ Absolutely unfair

20. To what extent do you believe that a family in India today has a "generation gap" between the parents and the teenagers similar to that which exists in the U.S.A.?

___ Very much like the U.S.A.
___ Somewhat like the U.S.A.
___ Can't really tell
___ Not much like the U.S.A.
___ Very much different from the U.S.A.

Questionnaire Form BBBB

21. Which of the following things had the major influence on shaping India's "philosophy of life"? Put a "1" beside the answer you believe had the most influence, a "2" beside the one which had the second greatest influence, a "3" beside the one which had the third greatest influence, a "4" beside the fourth greatest influence.

___ Religions
___ Caste system
___ Family structure
___ Nature and climate

22. Which of the following things had the major influence or shaping India's social values? Put a "1" beside the answer you believe had the most influence, a "2" beside the one which had the second greatest influence, a "3" beside the one which had the third greatest influence, a "4" beside the fourth greatest influence.

___ Religions
___ Family structure
___ Caste system
___ Nature and climate

23. Is it possible for a person in India to marry outside his own caste?

___ Possible in nearly all cases
___ Possible in most cases
___ Possible in some cases
___ Possible in very few cases

24. India today is tied to its cultural past.

___ Definitely agree
___ Agree
___ Don't know
___ Disagree
___ Definitely disagree

25. The idea of love and marriage in India is the same as the idea of love and marriage in the U.S.A.

___ Strongly agree
___ Agree
___ Don't know
___ Disagree
___ Strongly disagree

26. A family in India is a more closely knit unit than a U.S.A. family.

___ Strongly agree
___ Agree
___ Don't know
___ Disagree
___ Strongly disagree

27. An individual in India has more freedom today in selecting a mate, a job, etc. than in the past.

___ Strongly agree
___ Agree
___ Don't know
___ Disagree
___ Strongly disagree

28. The ancient gods and legends of India have played a minor part in shaping the cultural values of India.

___ Strongly agree
___ Agree
___ Don't know
___ Disagree
___ Strongly disagree

Questionnaire Form BBBB

29. Life in a city in India today is very much the same as life in a U.S.A. city today.

___ Strongly agree
___ Agree
___ Don't know
___ Disagree
___ Strongly disagree

30. The people of India believe that physical pleasures and tolerance for all forms of life are necessary for a "good life".

___ Strongly agree
___ Agree
___ Don't know
___ Disagree
___ Strongly disagree

31. Life in a village in India today is very much the same as life in a U.S.A. village today.

___ Strongly agree
___ Agree
___ Don't know
___ Disagree
___ Strongly disagree

32. To what extent do you believe that modernization is destroying values that should be preserved in the culture of India?

___ Destroying the cultural values of India
___ Somewhat destroying the cultural values of India
___ Not destroying the cultural values of India
___ Don't know

Please check Yes or No on the following questions:

33. Would you like to live next door to a family from India?

___Yes
___No

34. Would you like to entertain a person from India in your home?

___Yes
___No

35. Would you like to have a close friend marry a person from India?

___Yes
___No

36. Would you like to have your brother or sister marry a person from India?

___Yes
___No

37. Would you like to marry a person from India?

___Yes
___No

38. Would you wear an item of clothing worn by a person from India?

___Yes
___No

Questionnaire BBBB

39. Please check on the scale the degree of your feelings (views) toward the following statement -

I think of India as being:

Poor ___ ___ ___ ___ ___ ___ ___ Rich
1 2 3 4 5 6 7

Educated ___ ___ ___ ___ ___ ___ ___ Uneducated
1 2 3 4 5 6 7

Happy ___ ___ ___ ___ ___ ___ ___ Sad
1 2 3 4 5 6 7

Dirty ___ ___ ___ ___ ___ ___ ___ Clean
1 2 3 4 5 6 7

Crowded ___ ___ ___ ___ ___ ___ ___ Uncrowded
1 2 3 4 5 6 7

Friendly ___ ___ ___ ___ ___ ___ ___ Unfriendly
1 2 3 4 5 6 7

Progressive ___ ___ ___ ___ ___ ___ ___ Unprogressive
1 2 3 4 5 6 7

Civilized ___ ___ ___ ___ ___ ___ ___ Uncivilized
1 2 3 4 5 6 7

Moral ___ ___ ___ ___ ___ ___ ___ Immoral
1 2 3 4 5 6 7

40. Please check on the scale the degree of your feelings (views) toward the following statement -

In the dramatic plays of India, the priests and the monks are:

Respectful ___ ___ ___ ___ ___ ___ ___ Disrespectful
1 2 3 4 5 6 7

Helpful ___ ___ ___ ___ ___ ___ ___ Not helpful
1 2 3 4 5 6 7

Just ___ ___ ___ ___ ___ ___ ___ Unjust
1 2 3 4 5 6 7

Moral ___ ___ ___ ___ ___ ___ ___ Immoral
1 2 3 4 5 6 7

Influential ___ ___ ___ ___ ___ ___ ___ Not influential
1 2 3 4 5 6 7